

Eq. 4 should read:

$$\frac{\sigma}{M} = \frac{\sqrt{\sum_{i=1}^N q_i^2 n_i p_i [1 - p_i + p f_i n_i p_i] (1 - p f_i)}}{\sum_{i=1}^N q_i n_i p_i (1 - p f_i)} . \quad (4)$$